RESEARCH PAPER

A Survey on Knowledge and Attitude on Novel Corona Virus (COVID-19) in Kerala

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ABSTRACT

Novel Corona virus (Covid-19) outbreak started from Wuhan, China in December 2019. Covid-19 outbreak was declared as a global pandemic by World Health Organization (WHO) in March 2020. This study is based on understanding the COVID-19 situation in people's view from the state of Kerala. In this cross sectional study, an online questionnaire was circulated to people between 29th April, 2020 to 9th May, 2020. All age groups were considered to be eligible for the online survey to the co-ordeal responses from the residents across Kerala. Respondents were evaluated based on demographic details, knowledge on COVID-19 and attitude towards COVID-19. The Knowledge regarding the spread of corona virus, symptoms of the illness, availability of the vaccines, essentiality of hand wash, importance of hand hygiene and attitudes regarding social distancing, acceptance of recovered patients in society, need for travelling, belief of control over COVID-19 and self isolation among the people of Kerala. The results showed supportive nature and most of the people have knowledge about COVID-19. Also suggestions to government and health policymakers to build up the knowledge further since the number of new infected cases are on increase day by day.

Key Words: COVID-19, Pandemic, Knowledge, Attitude, Suggestions.

INTRODUCTION

Pharmaceutical

The Novel Corona Virus (COVID-19) had started from Wuhan province, China in December 2019 [1].The World Health Organisation (WHO) and Chinese health agencies tried to figure out and they found it as SARS CoV 2. The disease is highly infectious, and its main clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea [2]. The WHO has declared the outbreak as Public Health Emergency of International Concern on 30th January 2020 [3]. On 11th February, 2020 the WHO has announced a new name for the outbreak as COVID-19 [4]. On 11th March, the WHO has declared COVID-19 as a pandemic as it had

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already been infected in more than 114 countries [5].

In India the first case of COVID-19 appeared at Kerala's Thrissur district on 30th January 2020. The total number of cases in India as per 21st June, 2020 were 4, 11,826 and 13,254 deaths in total [6]. On 21st June, 2020, In Kerala, the total affected cases were 3039 and the deceased were 21 [7]. In the month of March and April, Kerala had the most number of cases being recorded but due to the efficient health system the cases were controlled to high extent. A lot of studies were conducted regarding the type of virus and found that there were a lot of similarities between SARS and COVID-19. There was a rise in the anxiety and panic attack among the common people. Early measures were taken in Kerala like social distancing and enhancement of awareness among the public. In the month of February, the Government of Kerala (GoK) advised the Tourism and the health department for making matrices for the patient grid who are being diagnosed with the disease [8]. In 22nd March 2020, guidelines were released in regarding the functioning of saloons, shopping malls, markets, laboratories, dental clinics where the usual public gatherings would happen.

The country announced an initial 3-week lockdown period on March 24, now extended until May 3, triggering rapid migrations from the cities to rural areas [9]. The phase of lockdown then had made a huge break in all essential goods, services, the economic clock, transportation, education. As COVID19 is a new disease and is having the most devastating effects globally, its emergence and spread, causes confusion, anxiety and fear among the general public [10]. A majority of Kerala's population lives outside India. When sudden lockdown came into effect, the fear grew into a high level in people for safety in the future days. Before the lockdown started, some people managed to reach back into Kerala and the others who could not, halted outside in fear of growing deaths all across the world. In the beginning it was very hard for everyone in the state to accept the pandemic. The economic impacts, the mental happiness and the perception of people changed to grim. With the case fatality ratio (mortality) 0.69% in Kerala, it is much less when comparing to the whole India (3.23%) [11]. The Government of Kerala worked very hard to spread the awareness among the people in social distancing, usage of PPEs and reduction in the anxiety issues. But the recent opening of the lockdown has made tremendous increase in the number of cases which are coming from out and within the state. Along with these cases, there are internal spreading between the

people which is untraceable. All these are continuously increasing the concern and stigma among people. These issues can be solved by promoting more knowledge and change in their attitude towards the pandemic. The knowledge regarding to spread of the corona virus, symptoms of the illness, availability of vaccines, essentiality of hand wash, importance of hand hygiene and attitudes regarding social distancing, acceptance of recovered patients in society, need for travelling, belief of control over COVID-19 and self isolation among the people of Kerala are the most important factor which helps the public to follow the measures for personal protection and for the protection of the society. Considering all the above factors, it is highly important to carry out a research to understand the current level of knowledge and attitude of population in Kerala towards COVID-19.

Scope of Research

The research was carried out to define how the people of Kerala view the Pandemic situation. Instead of having fear due to lockdown and false concepts about the pandemic, the people must have enough knowledge towards this pandemic like how to be safe, how to keep the society safe by abiding all laws. They should take this situation in utmost seriousness and with all the precautions in mind which the

Health department of Kerala and WHO gives. The Government of Kerala is doing its part smoothly but still effectiveness is not as expected. In addition, all techniques are also being suggested for the betterment for the enhancement of the knowledge on COVID-19 among people. For conducting the study, certain tools were considered like help of online questionnaire and online search engines.

Research Objectives:

- To assess the Knowledge regarding COVID-19 disease spread, source of information, symptoms, availability of vaccines and hand hygiene in Kerala.

- To check the Attitudes towards social distancing of the people, towards usage of sanitizer and face masks and towards the belief of control of the disease in Kerala.

- To suggest the measures for improving the knowledge of COVID-19 among people of Kerala.

Research Question:

- What is the Knowledge of the people regarding the COVID-19 disease spread, symptoms, availability of vaccines, source of information and hand hygiene in Kerala?

- What is the Attitude of the people regarding the use of sanitizers and face

masks, social distancing and belief of control of the disease in Kerala?

- What are the measures to be taken to improve the knowledge of COVID-19 among people of Kerala?

METHODOLOGY:

a) **Study Design**: Descriptive Cross-Sectional Study

b) **Setting:** General Population of Kerala

c) **Duration of the Study**: 29th April 2020 to 9th May 2020

d) **Sampling Method**: Convenient Sampling.

e) **Sample Size:** Using the total population of Kerala, 95% CI and 5% Margin of Error,

Sample size = $z^2 p\ q/d^2$ where z = 1.96, p = 0.5(assuming 50% of the population has the knowledge), q =1-p and d = 0.05. By using the above formula, the sample size came out to be **384**. The total responses were **416**, which was above the desired sample size.

f) **Data Collection Tool:**

Primary data was collected using Google form.

The research was divided into four sections (Demographic part, Knowledge part, Attitude part, Enhancement of Knowledge part). The Demographic part has variables like age group, gender, religion, education level, work experience and the district of residence in Kerala. In the Knowledge part, the questions included about the source of information

about the COVID-19 news the respondent gets, the symptoms this virus can cause, the way of spread in an individual and the community like questions. In Attitude part the questions included issues mainly on social distancing and its effect on disease spread, about travelling to other places at that point of time, social acceptance for those people who were infected before and then recovered, related to self isolation when having such symptoms, whether face masks and sanitizers were being followed or not, the response of the person when any of their family member getting affected by COVID-19 and whether the pandemic will subside or not.

Link for the questionnaire used available from:

https://docs.google.com/forms/d/e/1FAIpQLSe g16I39tigQfaDe2VYri6hUwNCpAoIVQ1qNcg esWRyqYgtdg/viewform?

Ethical Considerations

Here all the participants were informed prior about the voluntary participation. Along with the questionnaire, an ethical consent had also been forwarded to all the participants. The purpose of this survey had been mentioned prior to all the participants. Furthermore no questions were asked based on any issues which can cause mental morale down of the participants. Also it was made sure that at any point of time, the participant

can quit the survey if not feeling comfortable. All the responses had kept confidential and the anonymity of the data had been preserved.

RESULTS AND DISCUSSION

An online survey was conducted on knowledge and attitude towards COVID-19 on people of Kerala. A total of 416 responses were collected. All the participants were from various districts of Kerala and all districts were covered in the survey. The raw data was entered into Ms Excel spreadsheet for further analysis.

Data from the online questionnaire were analyzed under four categories

1) Part – 1 Demographic Analysis Part
2) Part – 2 Knowledge about COVID-19
3) Part – 3 Attitude towards COVID-19
4) Part – 4 Measures to enhance the Knowledge of COVID-19 among Kerala Population.

1) Part 1 – Demographic Analysis

a) Number of Responses from each District in Kerala

Table 1: Number of Responses from Each District of Kerala

Districts	Number of Responses
Kannur	92
Ernakulam	50
Kozhikkode	36
Malappuram	34
Thrissur	29
Thiruvananthapuram	27
Pathanamthitta	26
Palakkad	24
Kottayam	23
Kasaragod	21
Wayanad	18
Alappuzha	18
Kollam	12
Idukki	6

N = 416

b) Age Wise Distribution of Respondents

Table2: Age Wise Distribution of Respondents

Age (years)	Less than 17	18 – 35	36 - 58	59 -70	71 and above
Number of Respondents	19	154	143	68	32

Interpretation: In the age wise distribution, all the age groups were covered. It was observed that **37%** of the respondents belong to age group 18 – 35 years. **34.4%** of the respondents belong to 36 -58 years. The age group 59 – 70 years had **16.3%.** The extreme age group of 71 and above and less than 17 had **7.7%** and **4.6%** respectively.

Figure 1: Pie Chart showing gender distribution

Interpretation: In gender, females responded **50% (208)** whereas males responded **49% (204)** and transgenders has responded 1% (4).

Figure 2: Pie Chart showing Religion of respondents

Interpretation: When coming to religion, with **51% (212),** Hindus have responded the most then **21.9% (91)** Muslims and then with **21.2% (88)** Christians have responded among

the majority. People belonging to Jews responded to **1.7% (7),** Buddhist with **0.7% (3),** Jain with **0.2% (1)** and other minority religions with **3.4% (14).**

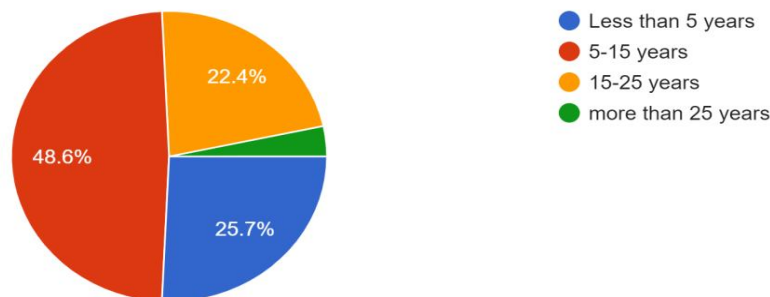What is your work experience?
416 responses

Figure 3: Pie Chart showing work experience

Interpretation: About **48.6% (202)** are having 5 – 15 years of work experience. **22.4% (93)** were having 15 – 25 years of work experience. **25.7% (107)** were having less than 5 years of work experience (this included people with no experience at all). **3.4% (14)** were having work experience of more than 25 years.

Respondents' Educational Level

Table 3: Respondents' Educational Level

Educational Level	High School	Diploma	Masters	Associate or	Doctorates
Number of Respondents	36	75	95	205	5

Interpretation: Here about **49.3%** involved the Bachelor as well as associates. **22.8%** were acquired with Masters degree. **18%** were diploma holders. **8.7%** were with the smallest group which is high school and **1.2%** was with doctorates group. The uneducated category was not included since they might face the difficulty in reading and understanding the e-questionnaire.

2) Part 2 - Knowledge on COVID-19

The Knowledge part involved questions related to COVID-19 and its spread which any citizen should know to prevent the disease transmission and remain safe.

Have you heard about COVID-19 or Corona virus? If yes, what is the source of the information? (multiple answers)
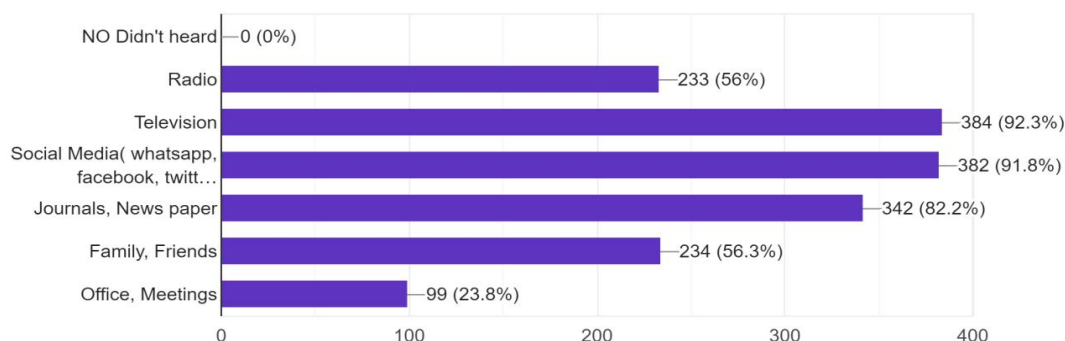416 responses

Figure Figure 4: Bar graph showing Information source

Interpretation: The question regarding source of information was in multiple choices where more than one answers can be possible. About **91.8% (382)** had said that through Social media like Whatsapp, Facebook, Twitter etc**. 92.3% (384)** marked television as the mode. **82.2% (342)** marked as news papers and journals. **56.3% (234)** got through their family and friends. **56% (233)** got the information through Radio. **23.8% (99)** selected through office meetings.

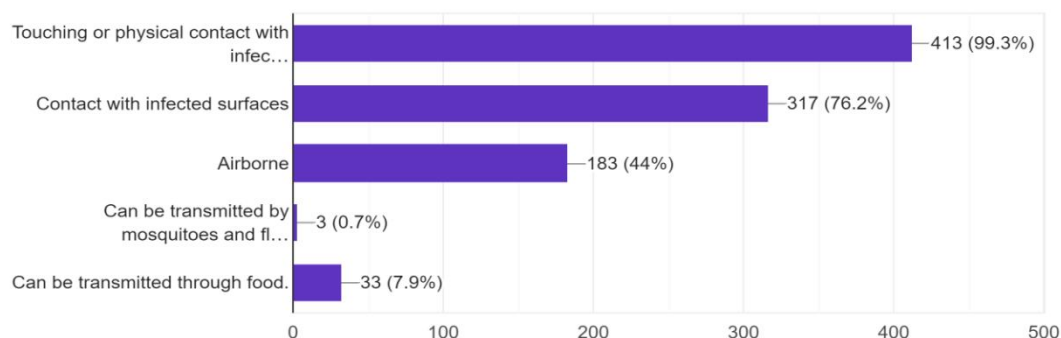How does the corona virus spread? (multiple answers)
416 responses

Figure 5: Bar graph showing spread of COVID-19

Interpretation: Coming on to the spread of COVID-19, here **99.3% (413)** selected spread of COVID-19 is through Touch and physical contact. **76.2% (317)** people supported that it can spread through having contact with infected surfaces. About **44% (183)** marked as airborne disease. **7.9% (33)** marked as can be transmitted through food, and **0.7% (3)** had

the false belief of disease can be transmitted through mosquitoes and flies.

Can Isolating a COVID-19 patient decrease the spread of the disease?
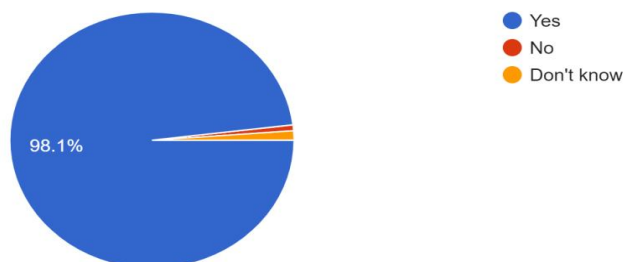416 responses

- Yes
- No
- Don't know

98.1%

Figure Figure 6: Pie chart showing importance of Isolation

Interpretation: About **98.1% (408)** had chosen that by isolating, spread of COVID-19 can be prevented. About **1.2% (5)** selected don't know and **0.7% (3)** marked No and isolation will not help.

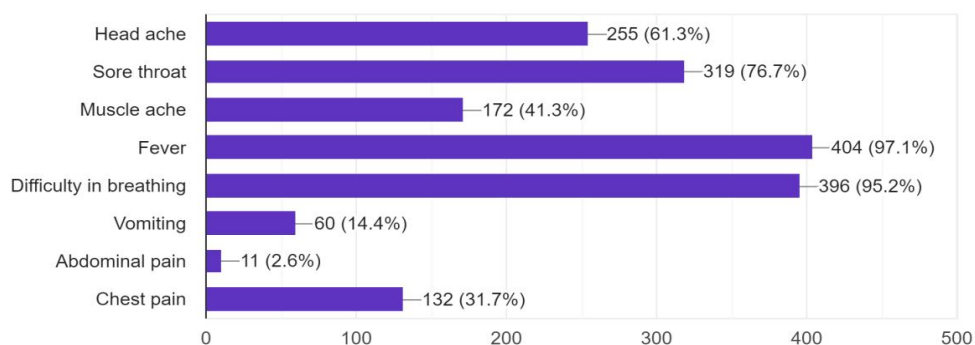Symptoms of the Corona virus are (multiple answers)
416 responses

Head ache — 255 (61.3%)
Sore throat — 319 (76.7%)
Muscle ache — 172 (41.3%)
Fever — 404 (97.1%)
Difficulty in breathing — 396 (95.2%)
Vomiting — 60 (14.4%)
Abdominal pain — 11 (2.6%)
Chest pain — 132 (31.7%)

Figure 7: Bar graph showing symptoms of corona virus infection

When coming onto the symptoms, about **97.1% (404)** people marked fever. **95.2% (396)** had difficulty in breathing as a symptom of COVID-19. **76.7% (319)** marked sore throat also as symptom. **61.3% (255)** had throat also as symptom. marked head ache. **41.3% (172)** marked muscle ache as a symptom. About **14.4% (60)** had chosen vomiting also as a symptom. **31.7% (132)** had chosen chest pain also and **2.6% (11)** had chosen abdominal pain also as a related symptom.

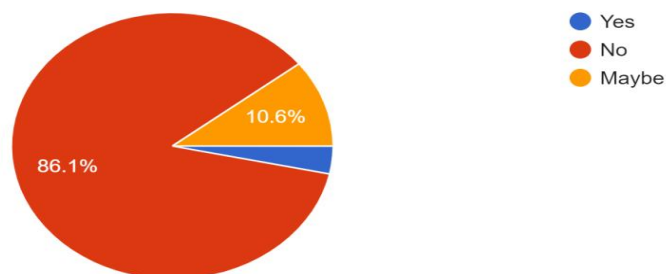Are there any vaccines available at present for COVID-19?
416 responses

Figure 8: Pie chart showing vaccine availability

Interpretation: When considering the availability of vaccines, about **86.1% (358)** people had chosen that there are no vaccines for COVID-19 till this time. About **10.6%** **(44)** respondents had marked there might be vaccine present and they do not know about it. **3.4% (14)** had marked that there are vaccines for COVID-19.

Does washing hands frequently can reduce the spread of the virus?
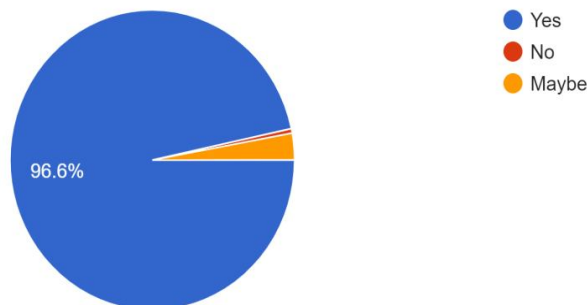416 responses

Figure 9: Pie chart showing importance of hand washing

Interpretation: When the essentiality of Hand washing was considered, about **96.6%** **(402)** had chosen that it is important. **2.9%** **(12)** had marked they do not know about importance of hand washing and **0.5% (2)** had selected that hand washing is not important.

According to you who are at a greater risk of getting infected by Novel Corona Virus? (multiple answers)
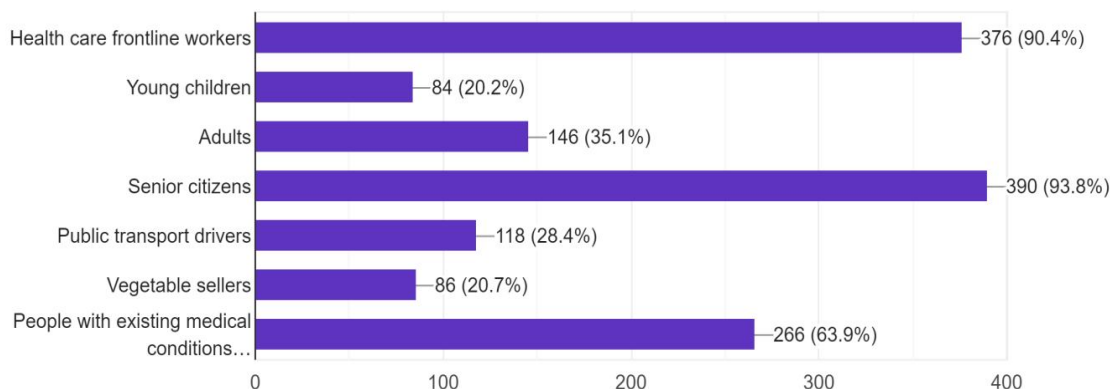416 responses

Category	Value
Health care frontline workers	376 (90.4%)
Young children	84 (20.2%)
Adults	146 (35.1%)
Senior citizens	390 (93.8%)
Public transport drivers	118 (28.4%)
Vegetable sellers	86 (20.7%)
People with existing medical conditions…	266 (63.9%)

Figure 10: Bar graph showing risk prone categories

Interpretation: Next question considering the people who are at high risk. About **93.8% (390)** people had chosen as senior citizens are more prone. **90.4% (376)** had responded that all health care frontline workers were prone to infection. **63.9% (266)** had responded that people with major health issues and other medical conditions were more prone. **35.1% (146)** marked as adults. **28.4% (118)** had marked as public transport drivers. Also **20.7% (86)** people responded as vegetable seller and **20.2% (84)** respondents had chosen young children also.

Which of the following statements regarding corona virus is true?
416 responses

- Novel Corona virus highly spreads
- Novel corona virus is highly fatal
- There is no treatment for corona virus infection as of now
- Prevention is not possible in the spread of corona virus
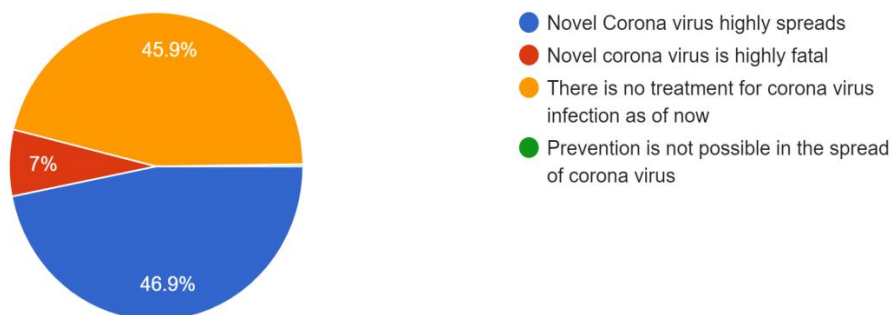
45.9%
7%
46.9%

Figure 11: Pie chart showing responses on COVID-19

The next question was regarding COVID-19 generally. Here four sentences were listed out of which any one suitable is marked. About **46.9% (195)** had chosen that COVID-19 highly spreads. **45.9% (191)** marked that COVID-19 has no treatment as of now and **7% (29)** selected that COVID-19 is highly fatal.

3) Part 3 - Attitude towards COVID-19

The Attitude towards COVID-19 part had questions to understand what people's frame of mind towards the disease spread is and how they will react upon a situation when they themselves or their family members if getting infected by the disease. The questions will help us to identify whether a positive or negative attitude is there towards the disease. The attitude is very important since it helps in people to follow up required instructions for the individual as well as the community well being.

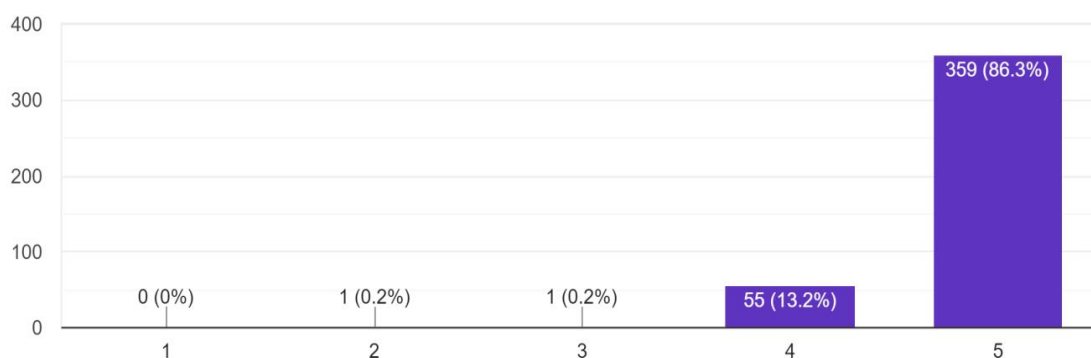Do you think social distancing is really helpful in controlling the disease spread?
416 responses

Figure 12: Column chart showing importance of social distancing

Interpretation: Regarding the social distancing, here five point likert scales is used with left as extremely no and right as extremely yes. About **86.3% (359)** respondents had chosen extremely yes for the benefit of social distancing in the spread of the disease. **13.2% (55)** people had marked as yes for the same question. **0.2% (1)** respondent had chosen to be neither yes nor no. **0.2% (1)** respondent marked no.

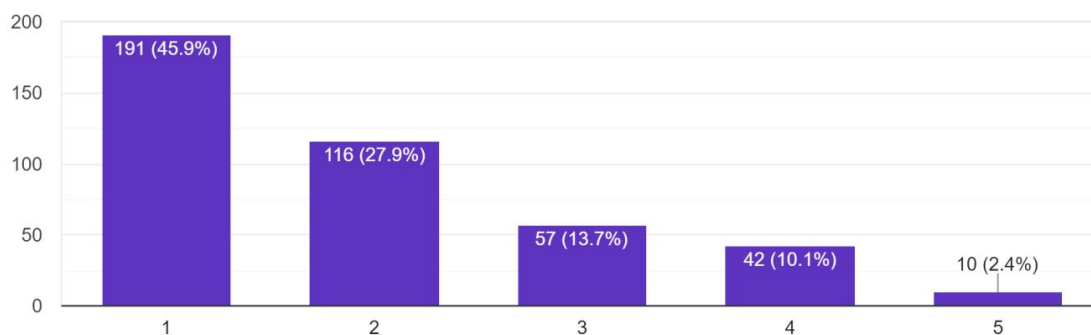Do you think travelling to different places should be done at this point of time?
416 responses

Figure 13: Column chart showing travel during pandemic situation

Interpretation: When attitude towards travelling was considered, here most of the people **45.9% (191)** had chosen that they extremely are not in support of travelling during COVID-19. **27.9% (116)** had selected no to the travelling. About **13.7% (57)** were with neither yes nor no. Very few **10.1% (42)** and **2.4% (10)** supported for travelling.

Do you always follow the usage of sanitizer and face masks whenever you go out of your home?
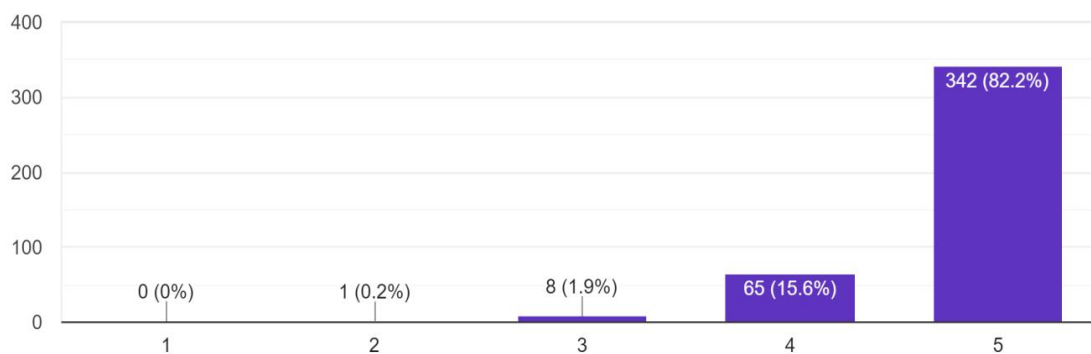416 responses

Figure 14: Column chart showing importance of sanitizer and face mask.

Interpretation: The attitude towards usage of Sanitizer and face masks are as about **82.2% (342)** respondents had marked extremely yes in the usage of sanitizer and face masks. **15.6% (65)** respondents had chosen yes. **1.9% (8)** people marked neither yes nor no and **0.2% (1)** had responded to no.

Should the patients who were infected and are declared cured be allowed to stay within the community?
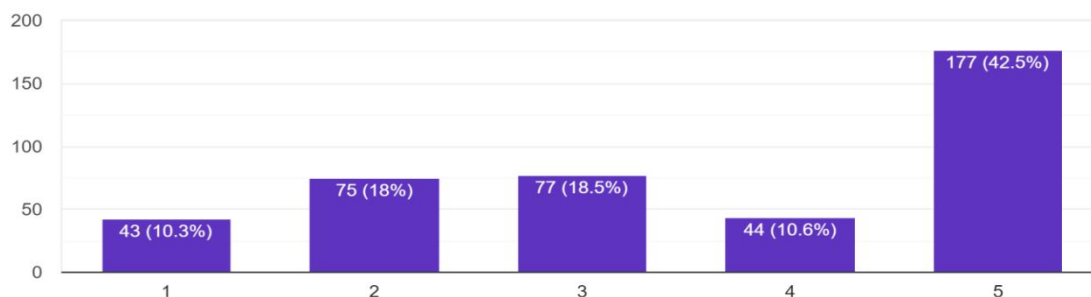416 responses

Figure 15: Column chart showing social acceptance of recovered people

Interpretation: Most of the people were in support of social acceptance of the recovered people, about **42.5% (177)** marked as extremely yes, **10.6% (44)** people supported marking on yes. **18.5% (77)** people marked on neither yes nor no. About **18% (75)** and **10.3% (43)** had chosen not to support the recovered patients with no and extremely no respectively.

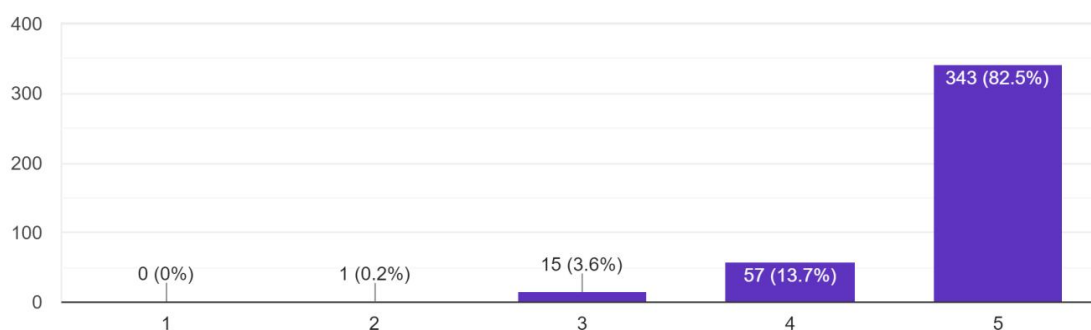Do you agree that COVID-19 will be finally controlled?
416 responses

Figure 16: Column chart showing the belief among people regarding COVID-19 control

Interpretation: When coming to the belief of COVID-19 getting control, here about **82.5% (343)** had full belief of getting control whereas, **13.7% (57)** people had marked yes and with **3.6% (15)** and **0.2% (1)** had marked with no belief of control from COVID-19.

How likely will you isolate yourself if you have any symptoms like Fever or sore throat?
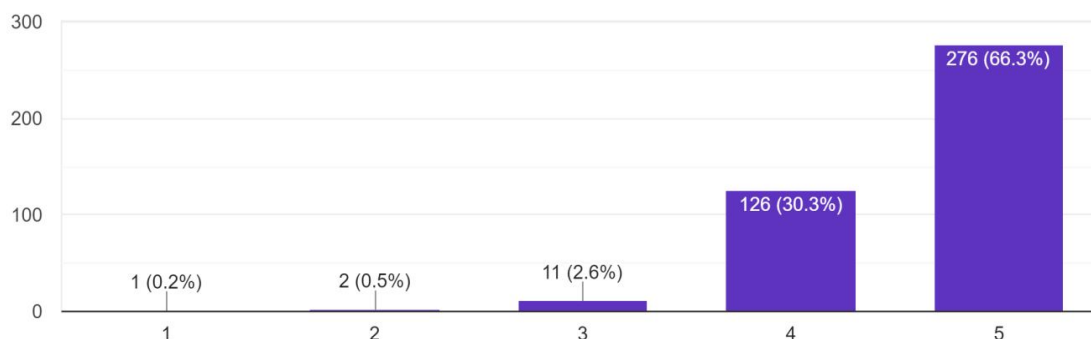416 responses

Figure 17: Column chart showing readiness of self isolation during emergency

Interpretation: Considering the attitude towards self isolation, most respondents were in support. About **66.3% (276)** people had chosen extremely yes, **30.3% (126)** had also supported by selecting yes. **2.6% (71)** had chosen neither yes nor no. **0.5% (2)** and **0.2% (1)** were not in support of self isolation and had selected no and extremely no respectively.

If anybody from your family is being infected by the virus, what will you do? (multiple answers)
416 responses

Figure 18: Bar chart showing response to hypothetical situation

Interpretation: The next question was with the hypothetical situation where respondent's family member is diagnosed with COVID-19. About **92.8% (386)** supported to call the nearby health worker. **69% (287)** respondents had chosen to take up self quarantine also. **49.5% (206)** people had selected to use of the personal protective things. **21.6% (90)** had accepted to take the patient to nearby hospital

and **1.4% (6)** had selected to show the patient to quacks.

Five Point Likert Scale Analyses for Attitude towards COVID-19

Table 4: Analysis of People's 'Attitude towards COVID-19' part

Question	Strongly disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)	Total	Mean Value	Standard Deviation
Need of social distancing.	0	1	1	55	359	416	4.85	0.447
Need for travelling.	191	116	57	42	10	416	1.95	1.104
Social Acceptance of recovered Patients.	43	75	77	44	177	416	3.57	1.442
Need for self isolation.	1	2	11	126	276	416	4.62	0.6
Importance of sanitizer and masks.	0	1	8	65	342	416	4.79	0.538
Belief of Control over the COVID-19	0	1	15	57	343	416	4.78	0.538

Interpretation: The issues which are directly related to the attitude part of the people are included here. The means were calculated accordingly which gave us the most number of responses areas. Also the standard deviation was also calculated accordingly using MS Excel. The mean of need for social distancing was *4.85±0.447* which were closer to 5. Thus it is in between *Strongly Agree* and *Agree*. The question of whether travelling should be allowed or not had a mean of *1.9±1.104*. In the social acceptance of already recovered patients, a mean of *3.57±1.442* was seen here, most of the people are in between agree and neither agree nor disagree. In the next question of preference of self isolation in presence of any symptoms, mean of *4.62±0.6* was seen. Here most of the people were in great support for self isolation during any symptoms. In the usage of sanitizers and face masks, a mean of *4.79±0.538* was seen depicting that a good number of the target population were in large support of usage of the masks and sanitizers. In the belief of controlling the COVID-19 fully, *4.78±0.538* were seen here again depicting that people having strong belief of fully controlling the pandemic. From all the above, the maximum standard deviation was seen in social acceptance and issue related to travelling.

4) PART – 4 ENHANCING KNOWLEDGE ABOUT COVID-19 IN KERALA POPULATION

For the effective and efficient public, it is highly required that enhancement of the knowledge about the pandemic should be well updated and preserved. As awareness of each individual increases, it directly affects the community by reducing the spread, causing less chaos. The following are some suggestions which were taken from Government of Kerala – DHS (Directorate of Health Services) and MoHFW which may be used.

a) Suggestions for Individual Awareness

- Each individual in the state may use the information displayed in websites like WHO(Facebook, Twitter, Instagram), UNICEF(Facebook, Twitter, Instagram), DHS(Kerala)

- The valuable messages based on COVID-19 from UNICEF, WHO, MoHFW and GoK may be shared to all other people.

- Each individual may get registered in Aarogya Setu application by MoHFW for getting knowledge and to identify whether each individual is at safe locality or not.

- There are online COVID-19 classes and quizzes available under WHO, MoHFW, Ministry of AYUSH, NHM

Thiruvanathapuram which when attended properly will help other people regarding enhancement of knowledge.

- The people who are not that active on social media and with poor internet service, they may use the newspapers, supplementary health magazines, health journals for getting latest knowledge.

- The checklist given by various health organisations in Kerala, India and around the world so that activities can be easily checked by individual.

- The Public Relations Department of Kerala may function for providing important messages to each individual in their own phones.

b) Suggestions for Community Awareness

- Proper sharing of information to people residing and should take necessary steps that will help the higher authorities to get proper information (local).

- The social media where one can share important information like hand washing, face mask designing, spread related information, myths versus facts, boosting up the morale of the depressed may be done using live videos. Use of dance, painting, poetry and short films to spread awareness.

- The usage of fun and humour may be used as a technique to spread information which has good effect on the minds of people.

- Drones may be used to spread the information and watching people residing in the containment zones so that burden on police forces gets reduced.

- Government may issue the mid day meals to the children who are studying at home with good publicity so that other people residing nearby also gets an idea about the intensity of the danger of this disease.

- Posters and banners may be used by health workers and other political parties to spread dos and don'ts during this period and enhance their knowledge.

- For the community needs, setting up the virtual activity with friends or neighbours to show solidarity and support during the crisis. Getting registered in any NGO and can spread awareness to the deprived people who are poor and are most affected.

- Usage of mobile applications by Kerala state government exclusively for health services. Containing important numbers and locations of nearby COVID-19 centres.

- To reduce the fake news and data about COVID-19, the Kerala government may start a new authenticated platform in digital and offline so that real time information reaches to all the people.

DISCUSSION

The people of Kerala have the knowledge about COVID-19 and showed a positive attitude towards the pandemic control. Still the conditions were not enough to get it into proper control. Suggestions to the policy makers and the government of Kerala had been added for trying to bring some changes in perception of individual and community.

However, there were few people whose thinking and attitude are not as expected, which the standard deviations showed. The major problem is that since this disease is highly contagious, a small carelessness could create big issues in the community. In the knowledge part, overall people knew most of the important aspects of the diseases like spread, symptoms, source of information, preventive measures like usage of masks and sanitizers were tested and a positive response had been got. Even the people also had the idea of the risk categories so that they can take precautions according to their surroundings. When the attitude was considered, most people were in the support of social distancing to stay safe since idea about the unavailability of the vaccine already had been present. An issue observed in the case of acceptance of the recovered patients in their society. With a high

standard deviation, this had been a dilemma topic for the society since creating a social stigma to the recovered patients.

Due to worldwide economic recession and fear of being unemployed, people have a tendency of restlessness during lockdown and in the unlocking phases. Our findings have helped to find out such issues which could produce threats of spread of the disease in the society. Moreover our findings has helped to find out that still the attitude of people of Kerala are in supportive and self embraced to all the present government policies and protocols and upcoming safety protocols.

LIMITATIONS

The main limitation of this study is that it is conducted with that group of people who are having access to internet and social media. Due to strict lockdown across Kerala state, it became tough to reach out to people directly. Also this study is pertained to those people who are having a good knowledge in English language thus depicting that study done with the educated group of people.

CONCLUSION

During this Novel Corona virus pandemic (COVID-19), most of the educated people of Kerala are well aware of this infection. The attitude towards the pandemic is taken as a serious thing by the Kerala government and its public. The knowledge among people about the basic preventive measures, spread of the virus, symptoms, use of sanitizer and face mask, knowledge of greater risk communities and availability of vaccines are quite convincing. Based on the analysis of their attitude part about social distancing, travel restrictions, belief of control over COVID-19, how to handle when an infected case happens in their family are also depicting a positive attitude which is needed in this situation. The suggestions for the enhancement of the awareness about COVID-19 might help the state's population, government and health team in tracing the problem. However, the present COVID-19 pandemic is still rising in Kerala. There is a need to intensify knowledge and attitude towards the disease which will further help in decreasing the individual related confusions about the disease and the community spread. Although there were a few studies which already took place regarding the knowledge and attitude of public regarding the pandemic, but there are no studies yet regarding the study on knowledge, attitude of public of Kerala. Thus, it is always important to study theses attributes in not only Kerala but all states' diverse population for betterment.

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